

Amended Claims

We create multiple nodes of a TCP/IP ("transmission control protocol / internet protocol") network capable of encrypted communications as follows: we install a "Slackware" linux distribution to a target partition of a computer hard drive mass storage device which shall be converted to an iso9660 filesystem (a computer operating system which runs from a Compact-Disc Read-Only Memory disc ("CDROM")); we compile a special Linux kernel based on the Linux 2.4 series which has been altered to support the "FreeSWAN (a trade name) Internet Protocol Security" ("IPSEC") system for TCP/IP encryption, as well as 8 "ramdisks" (simulation of external mass storage devices in memory) of size 16384 kilobytes each, and copy this kernel to the target partition; we copy files associated with, and a product of, the compilation of both the kernel and "FreeSWAN IPSEC" to the target partition; we compile the MIT ("Massachusetts Institute of Technology") product Kerberos 5 ("Kerberos system for internet authentication, authorization and security, version series 5") and copy associated files to the target partition; we use scripts to generate files which are associated with the "BIND 9 nameserver" (a standard product of the Internet Systems Consortium), to provide the ability to do forward and reverse lookup in DNS ("domain name service", a function of BIND 9 nameserver) and we copy these files to the target partition; we restart the computer to boot from the new partition; we use scripts to initialize the "Kerberos KDC" ("Kerberos version series 5 Kerberos Data Center") which will control authentication and authorization functions for the TCP/IP subnet we will create; we use scripts to create instances within the "Kerberos KDC" of specific host (a host may be any computer with a TCP/IP capability) and user names and passwords; we use scripts to generate, in a specific directory, multiple unique instances of "Kerberos keytabs" (coded information used by Kerberos for authentication and authorization) each of which is based on information provided by the configuration files for the "BIND 9 nameserver"; we use scripts to

modify the files “/etc/ipsec.conf” and “/etc/ipsec.secrets” to configure the “FreeSWAN IPSEC” communications parameters such as connection name, connection type, and connection start-up and routing as well as to supply “pre-shared key” (an encryption feature and authentication method of “FreeSWAN IPSEC”) and lists of IP (“internet protocol”) addresses to which that pre-shared key may apply; we modify and add start-up script files in the directory “/etc/rc.d” to ensure proper startup of all systems at boot time; we modify the file “/etc/inetd.conf” to activate functions of “Kerberos 5” to operate as needed; we generate and write a file “/root/.krb5_login” to allow superuser access via “Kerberos 5” authenticated login method; we generate or modify the file “/etc/lilo.conf” to properly configure the “LILO” Linux Kernel Bootloader and then we operate the bootloader in configuration mode to set up the boot sector and boot directories of the filesystem; we reboot to the original instance of the operating system to begin the per-node generation of the iso9660 images which will be written to CDROM media; we move the individual “Kerberos 5 keytabs” from the target partition to a local directory; we copy all files from the target partition to a “processing partition” which serves as the template from which the iso9660 images will be generated; we use scripts which iteratively overwrite in multiple passes to add to this “processing partition”: username, group and permissions information, “.krb5_login” information and the appropriate “Kerberos 5 keytab” as well as an appropriate “/etc/krb5.conf” file to identify the appropriate “Kerberos KDC”, IP (“Internet Protocol”) address and network configuration information including designation of appropriate “DNS nameserver” and routing information, and then we generate the iso9660 image and write it to CDROM media, repeating until all units comprised in this network are finished being generated and written.

